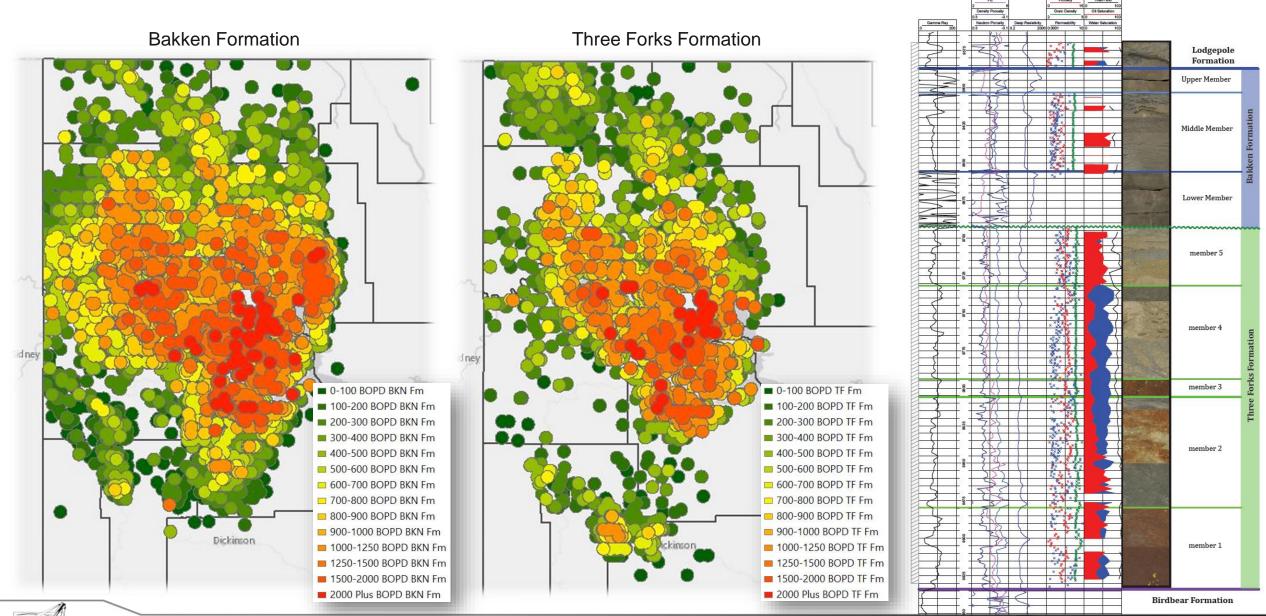
# **Energy Development and Transmission**Interim Committee

Justin J. Kringstad

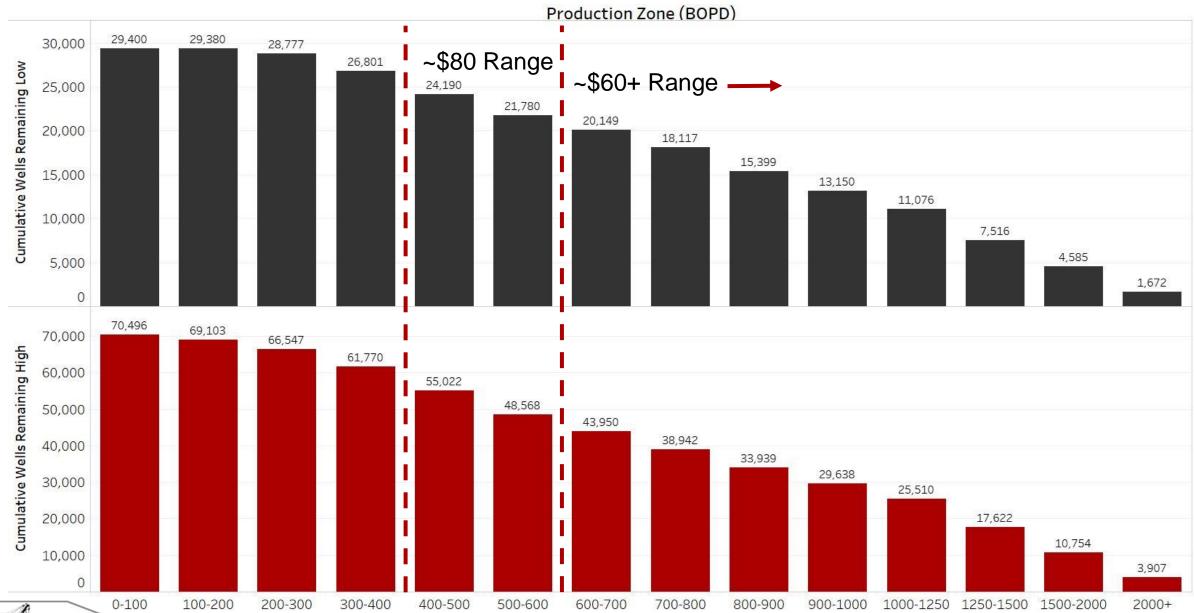
Geological Engineer
Director
North Dakota Pipeline Authority



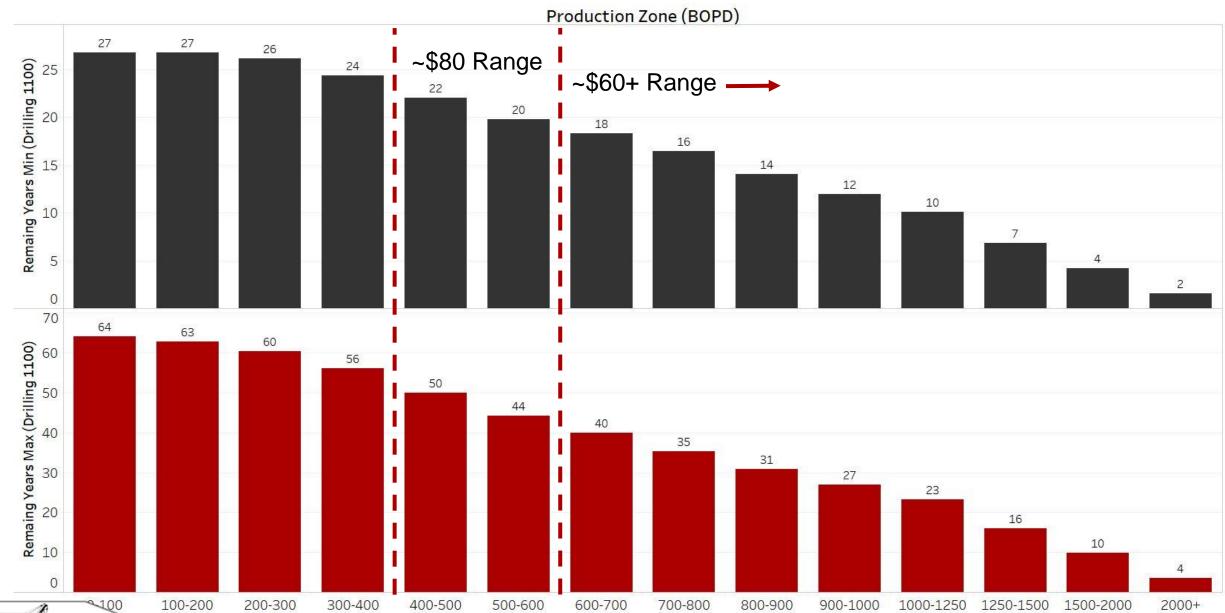
#### Bakken & Three Forks Formations – Feb. 2022



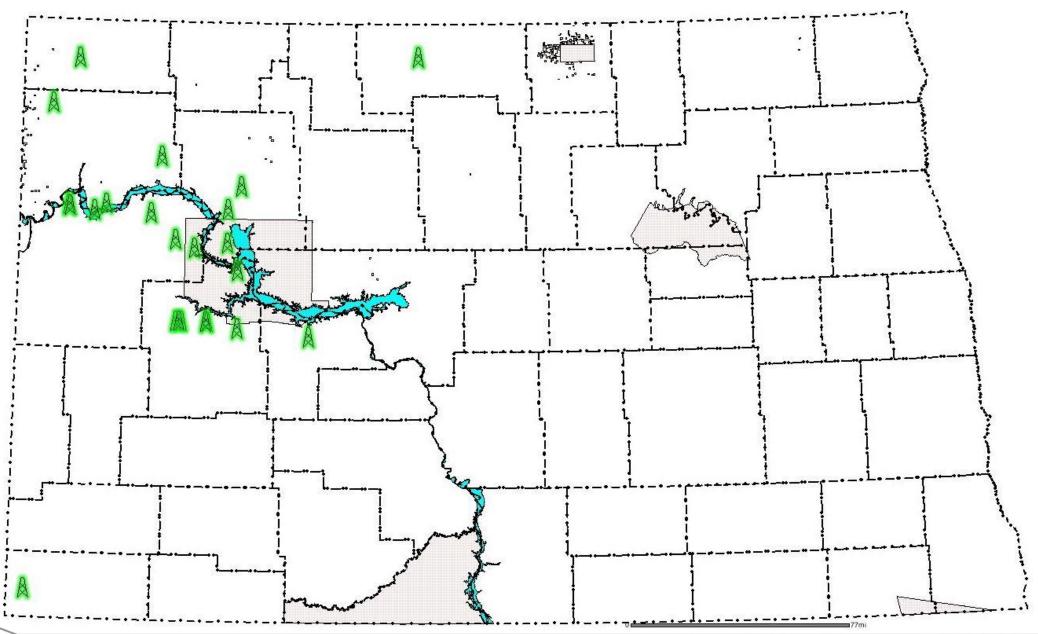
#### Remaining Drilling Inventory (Bakken/Three Forks)



### Years of Inventory at 1,100 Wells/Year



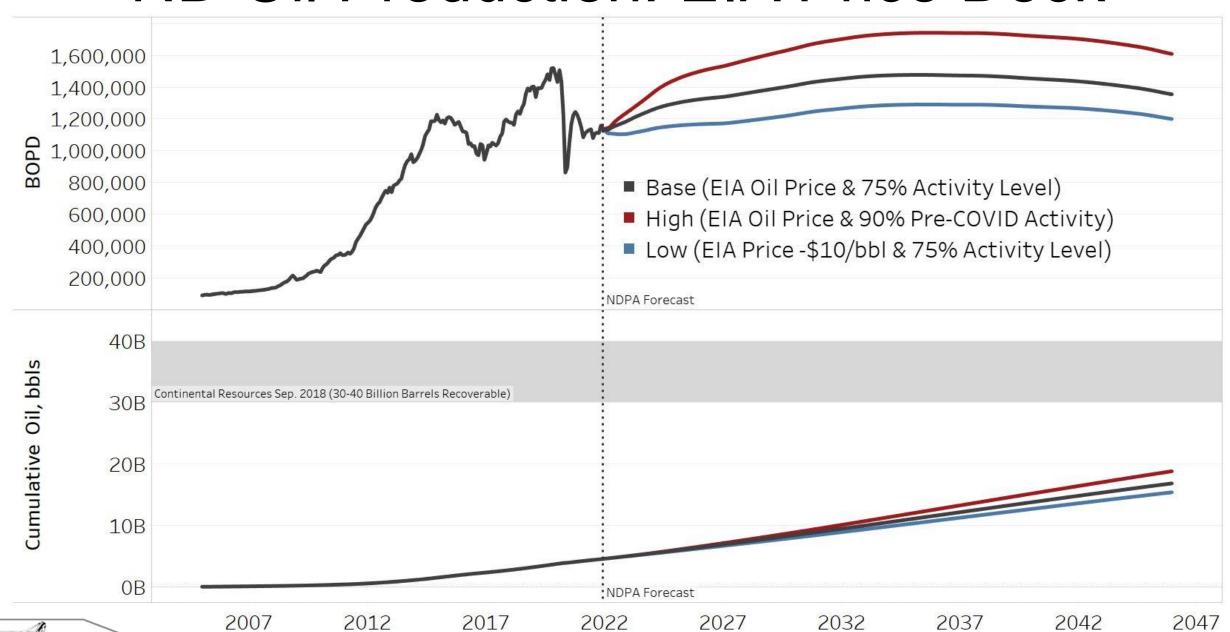
#### North Dakota Drilling – 33 Active Rigs (Feb. 24, 2022)



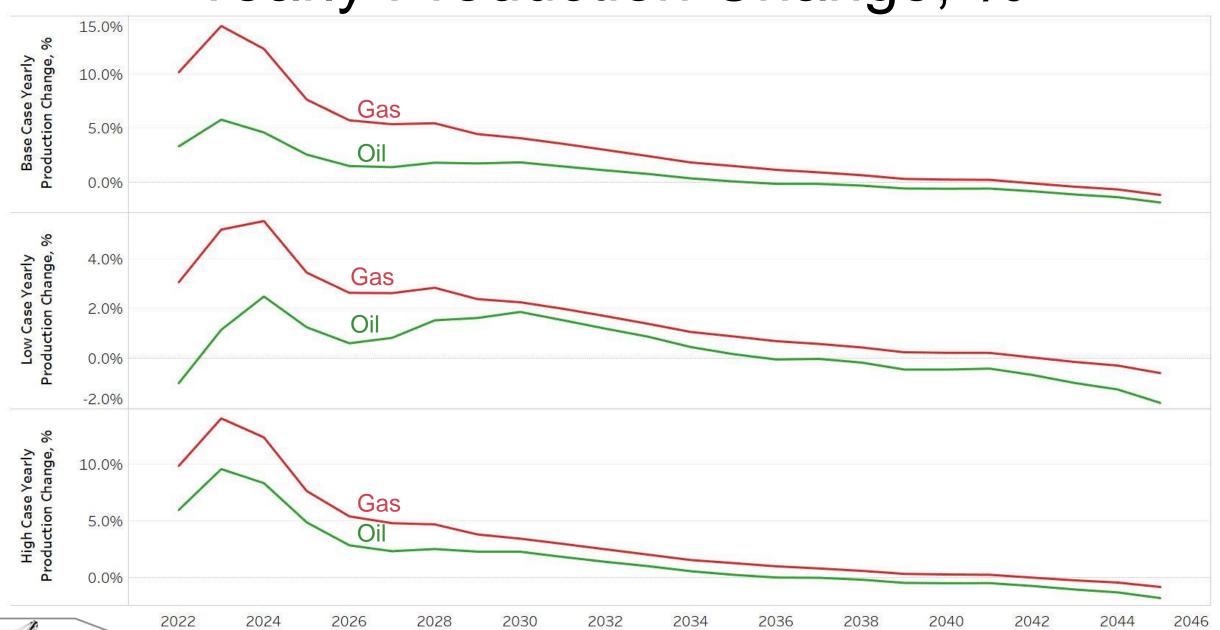
## Drilling Rig Breakdown



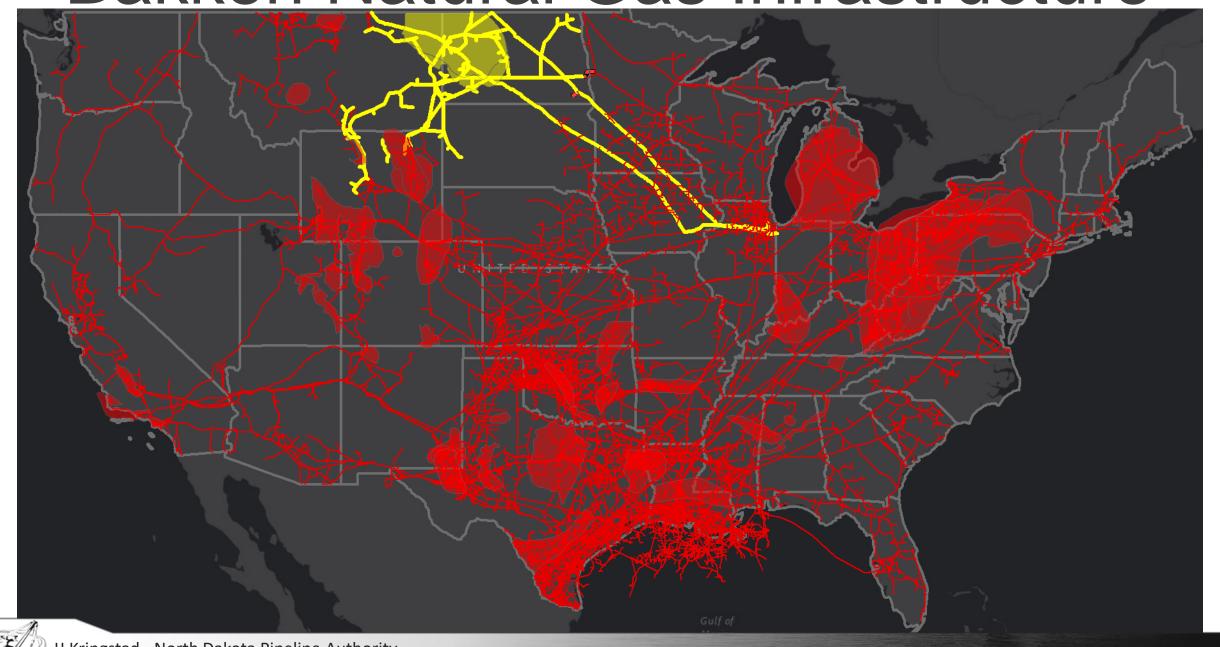
#### ND Oil Production: EIA Price Deck



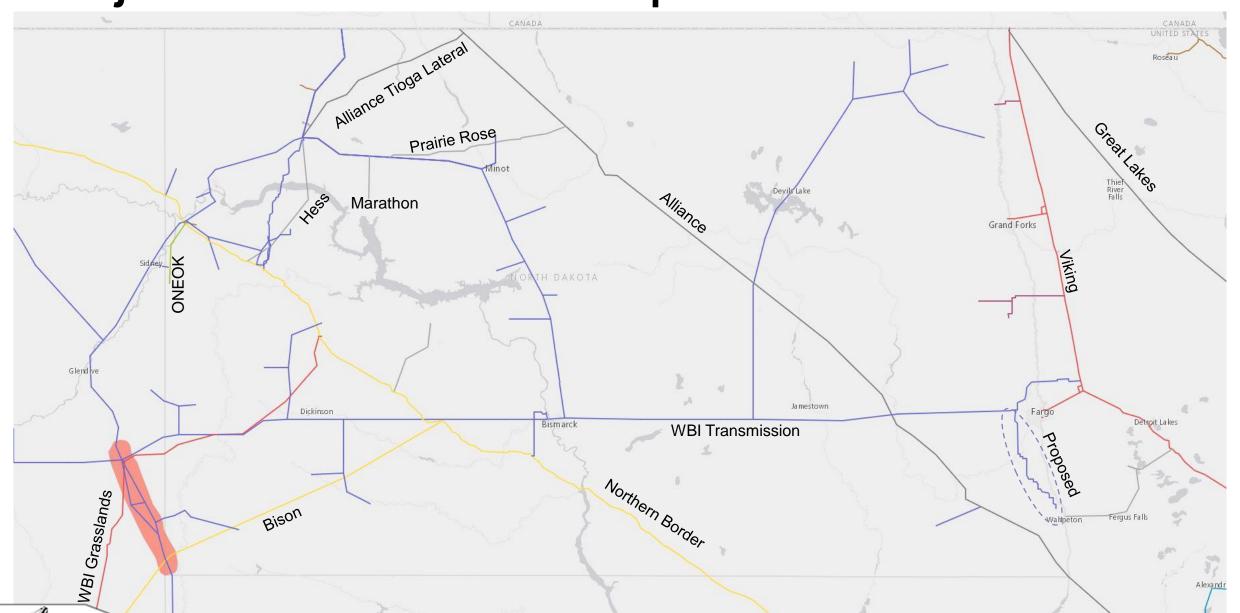
## Yearly Production Change, %



# Bakken Natural Gas Infrastructure



## Major Residue Gas Pipeline Infrastructure



# Natural Gas Update



- Production
- Technology
- Markets



- Gathering
- Capacity
- Connections



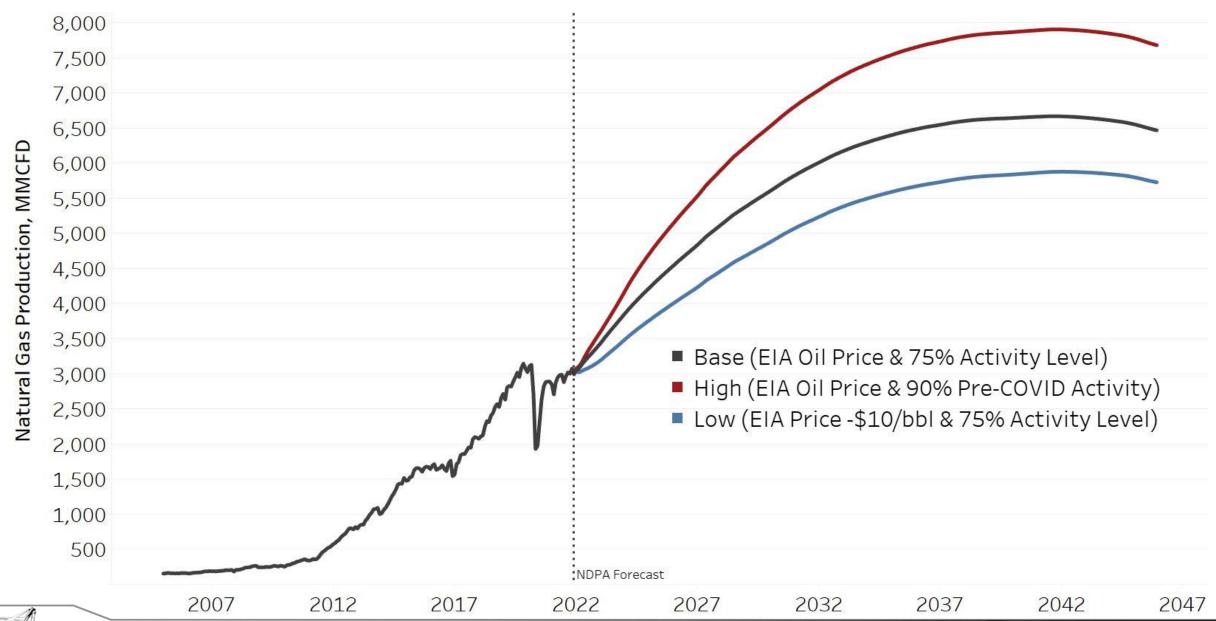
- **Processing**
- Capacity
- Location



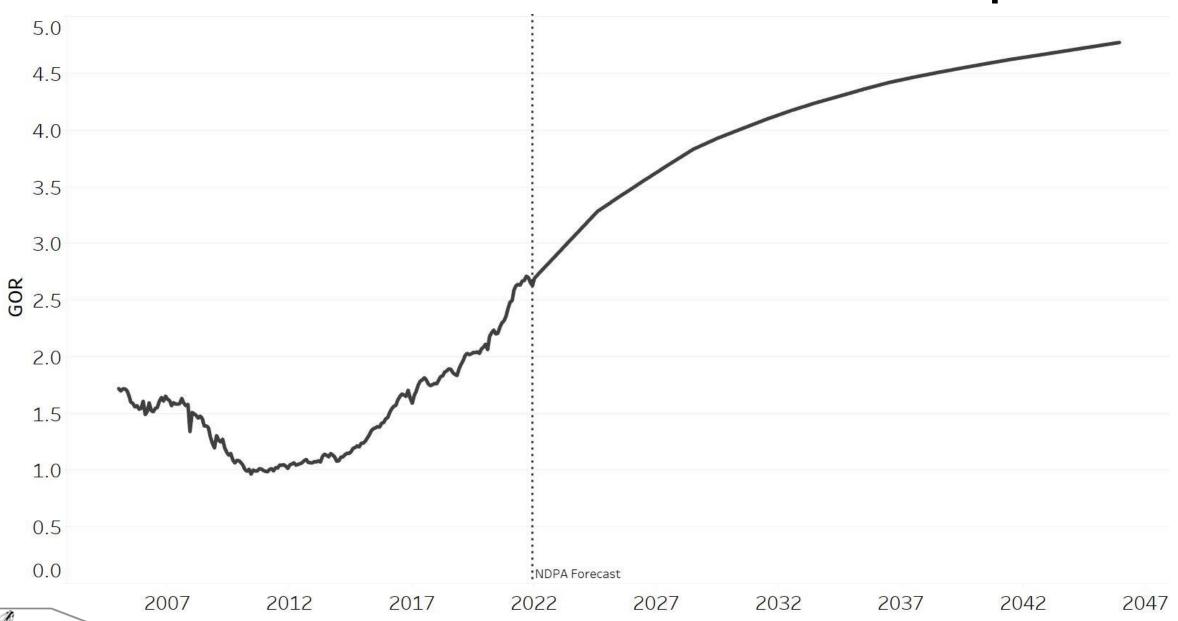
- Transmission
- Dry Gas
- Natural Gas Liquids



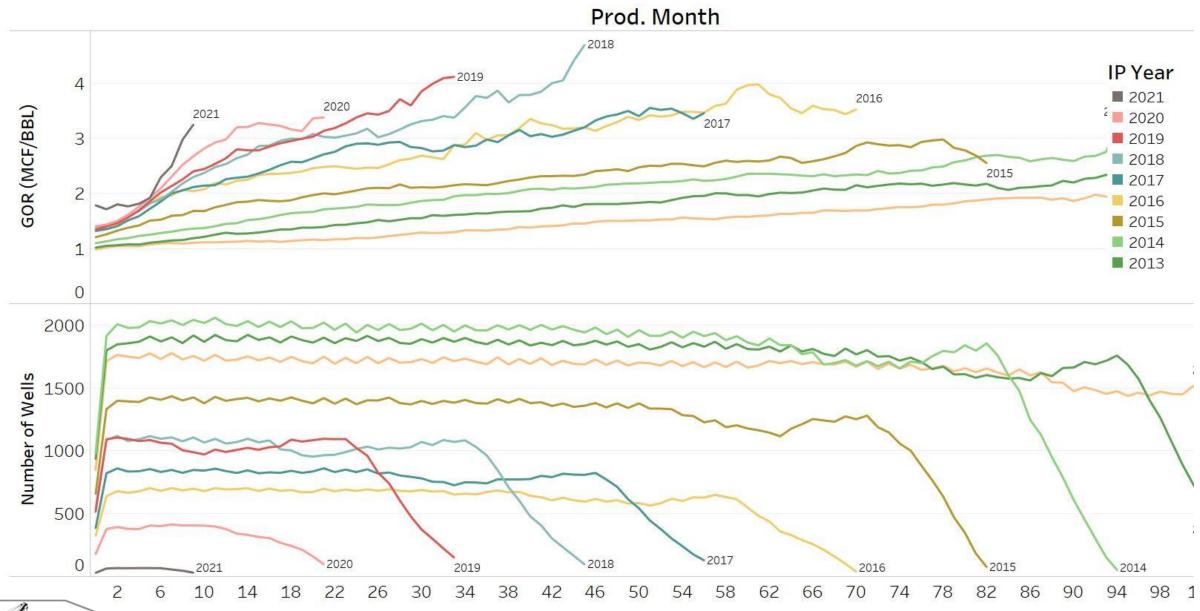
#### ND Gas Production: EIA Price Deck



### ND Gas Production: GOR Assumption



#### Statewide Bakken Gas/Oil Ratios



# Natural Gas Update



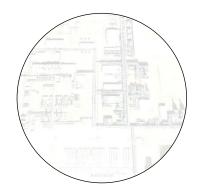
#### **Production**

- Technology
- Markets



Gathering

- Capacity
- Connections



**Processing** 

- Capacity
- Location

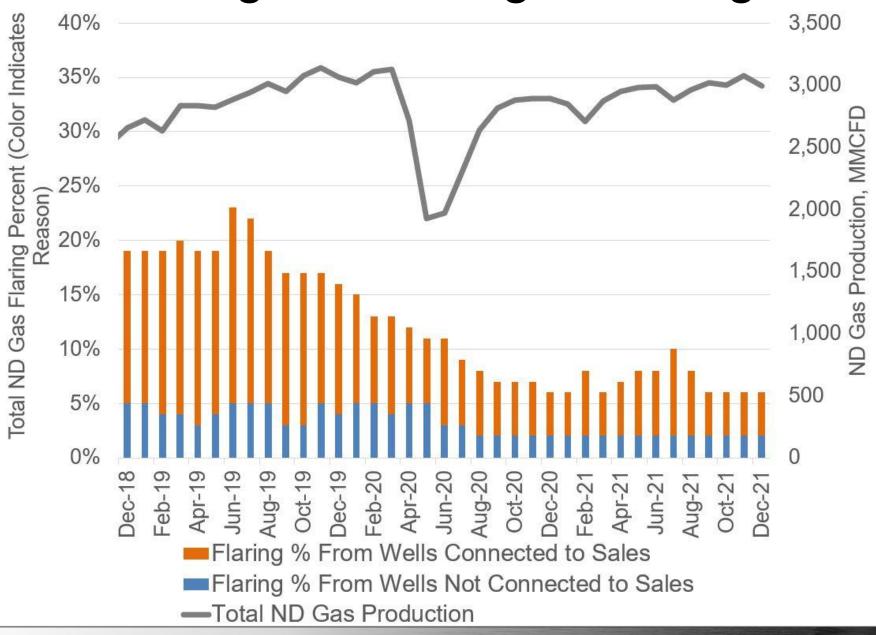


**Transmission** 

- Dry Gas
- Natural Gas Liquids

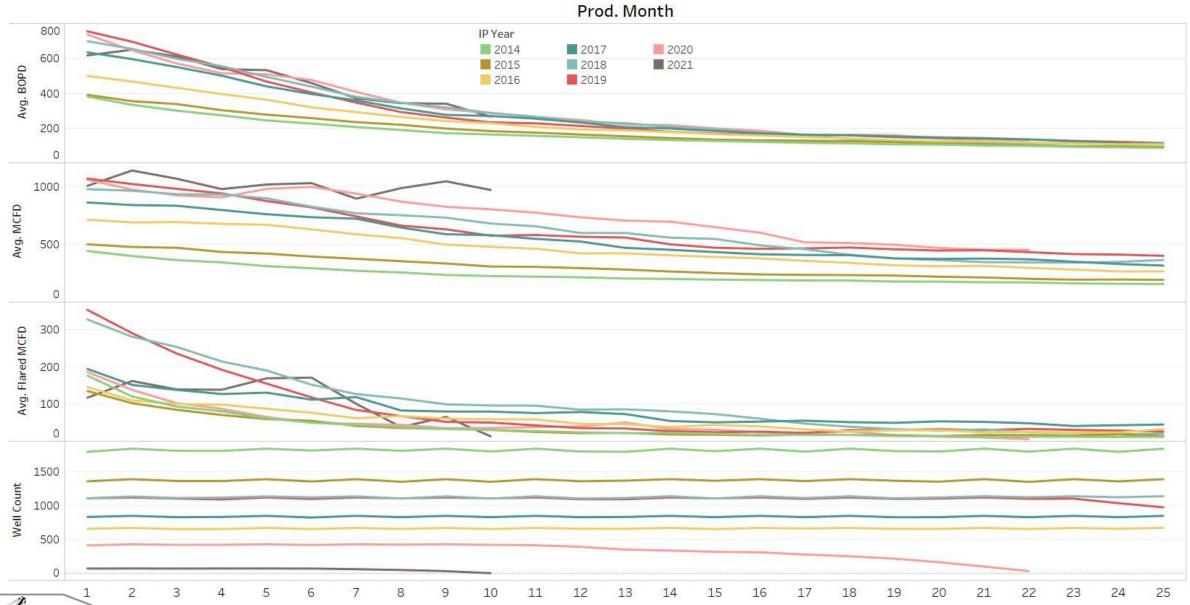


#### Solving the Flaring Challenge

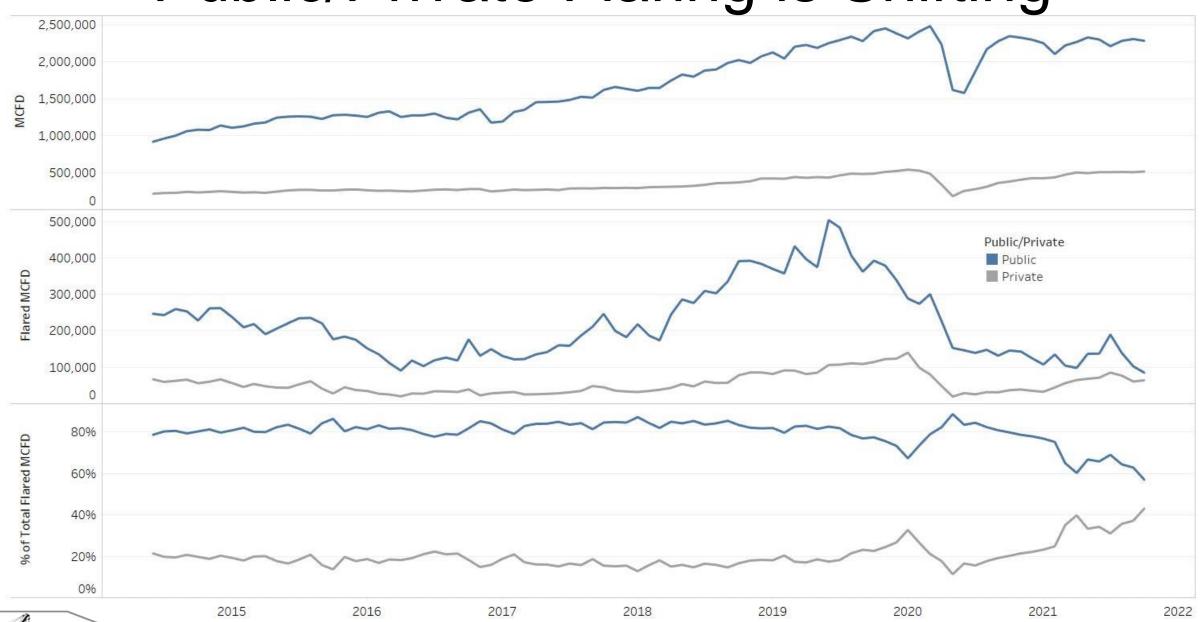




## Shifting Early Production Strategies



## Public/Private Flaring is Shifting



## Natural Gas Update



#### **Production**

- Technology
- Markets



Gathering

- Capacity
- Connections



Processing

- Capacity
- Location

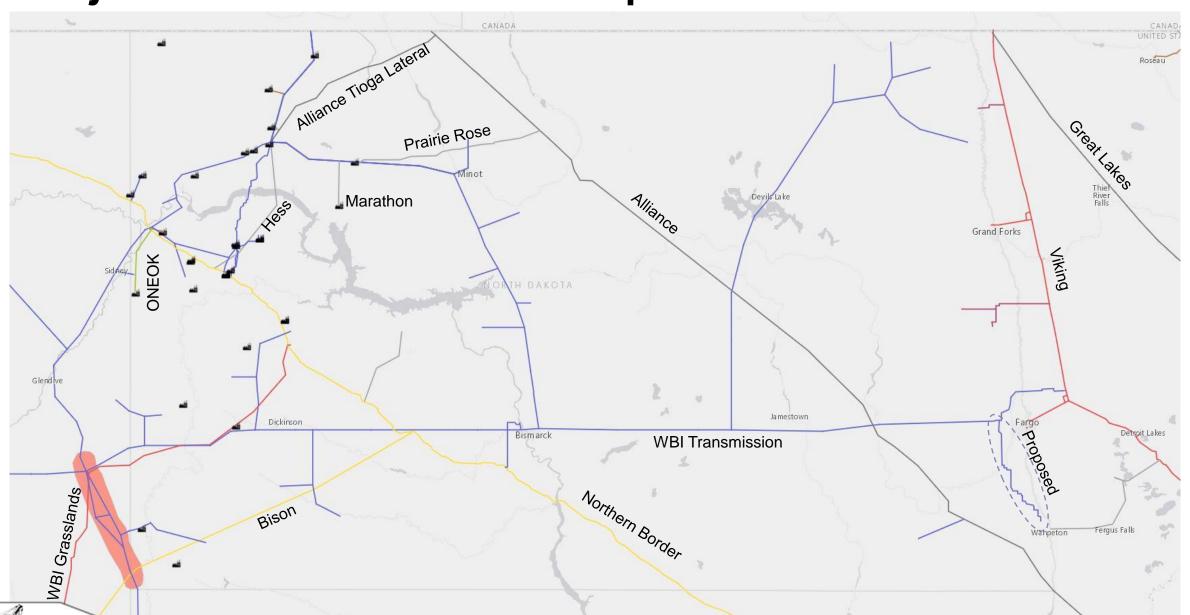


**Transmission** 

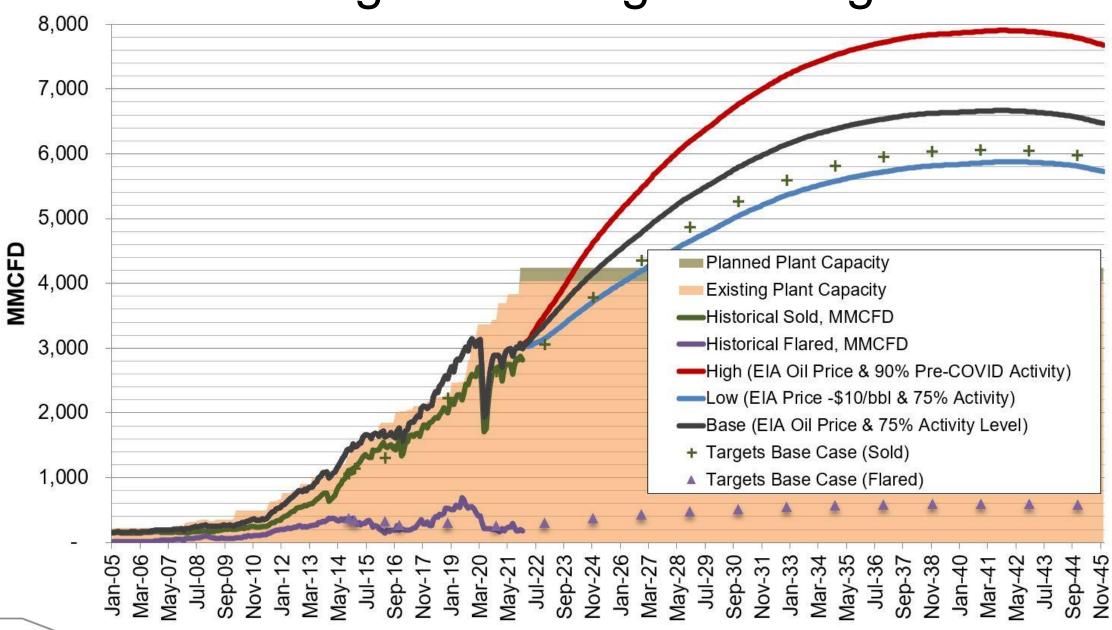
- Dry Gas
- Natural Gas Liquids



## Major Residue Gas Pipeline Infrastructure



#### Solving the Flaring Challenge





# Natural Gas Update



#### **Production**

- Technology
- Markets



Gathering

- Capacity
- Connections



Processing

- Capacity
- Location



**Transmission** 

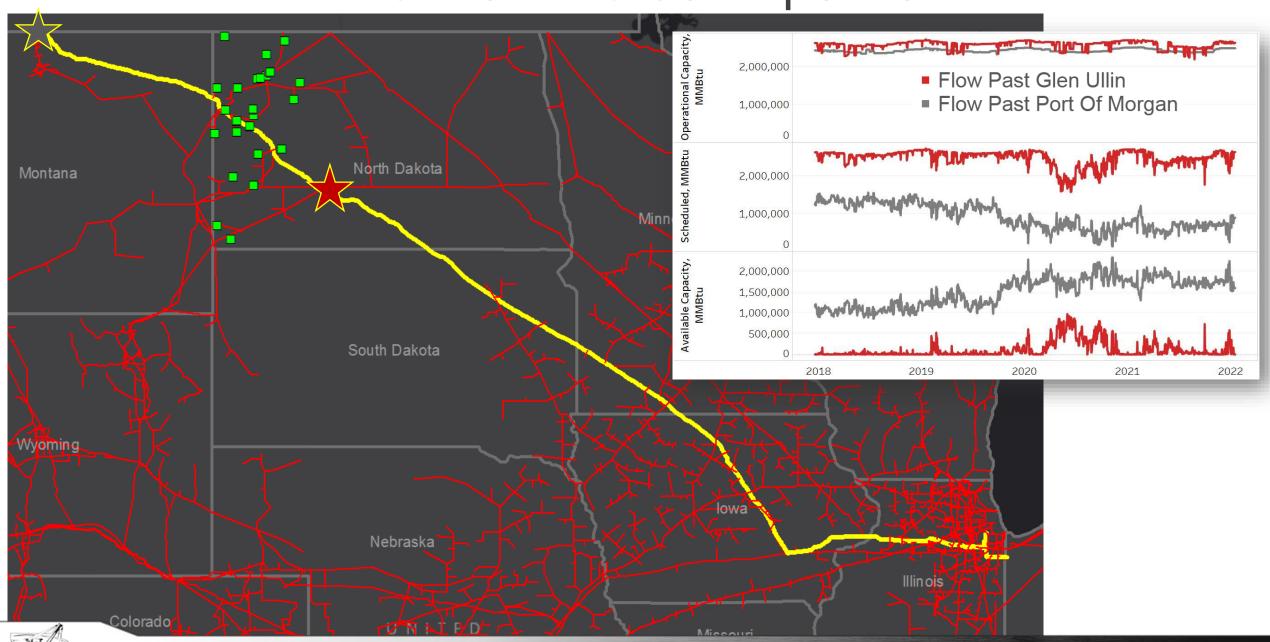
- Dry Gas
- Natural Gas Liquids



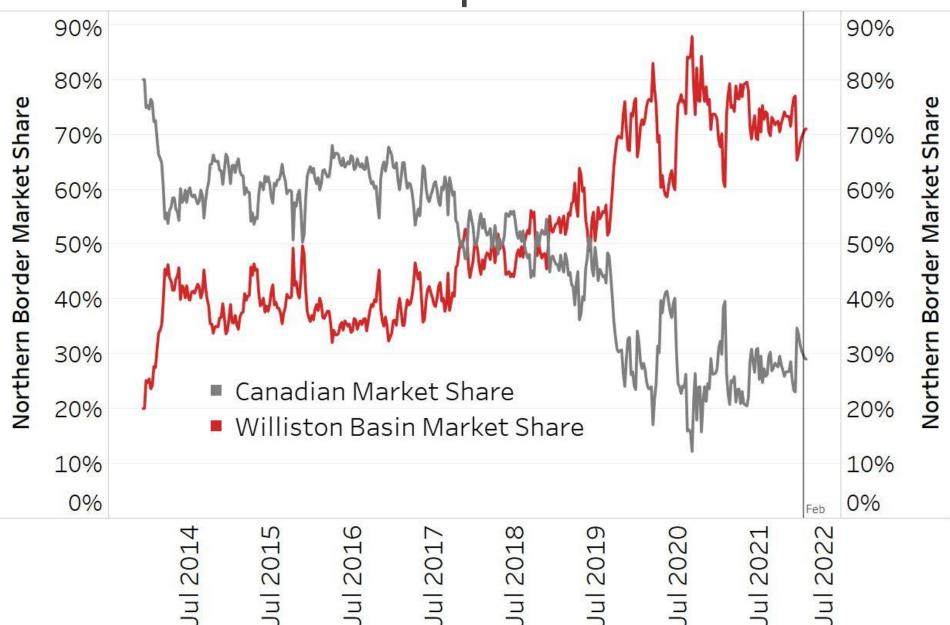
# Bakken Natural Gas Infrastructure



#### Northern Border Pipeline

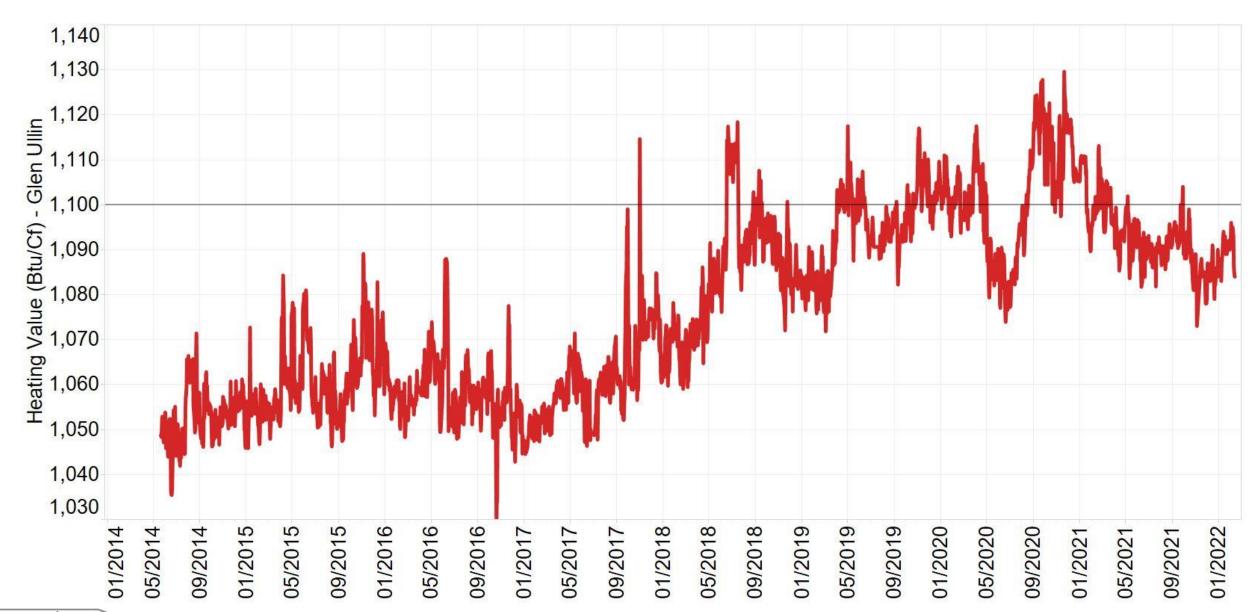


#### Northern Border Pipeline Market Share



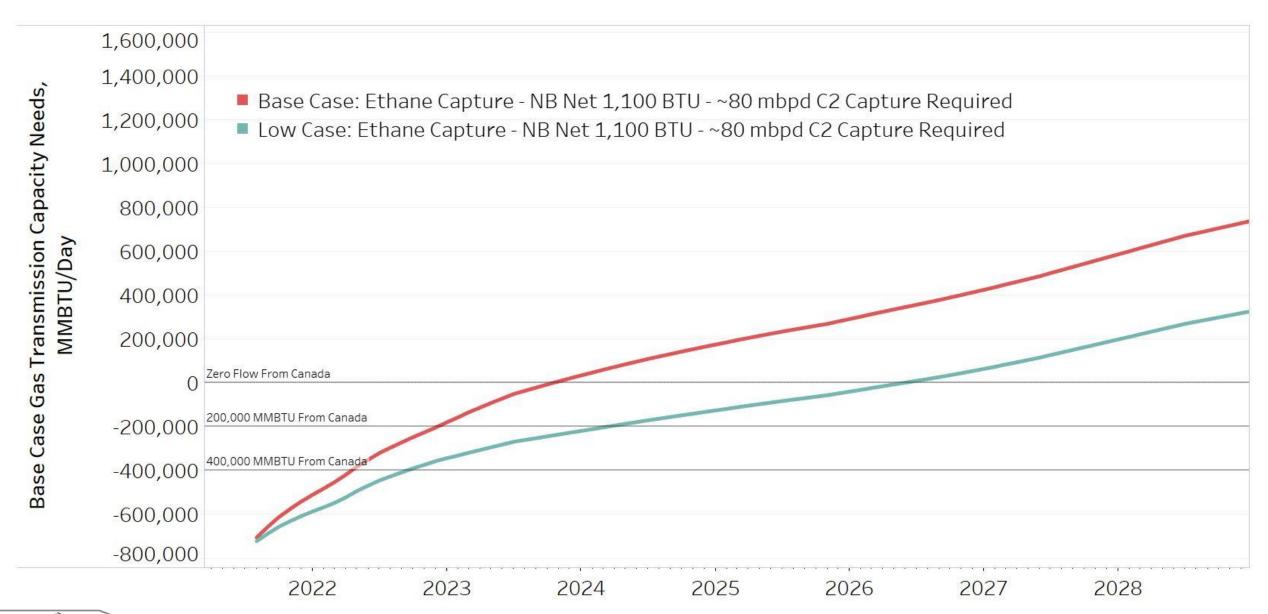


#### Northern Border BTU at Glen Ullin, ND





#### Northern Border – BTU Calculations\*





#### NGP – 1.01 Purpose Statement

The Industrial Commission was directed by the Sixty-seventh Legislative Assembly of North Dakota to establish a natural gas pipeline grant program to allow for the transportation of natural gas for utilization in eastern North Dakota thereby expanding the North Dakota economy, increasing employment, stimulating economic activity, augmenting sources of tax revenue, and fostering economic stability.

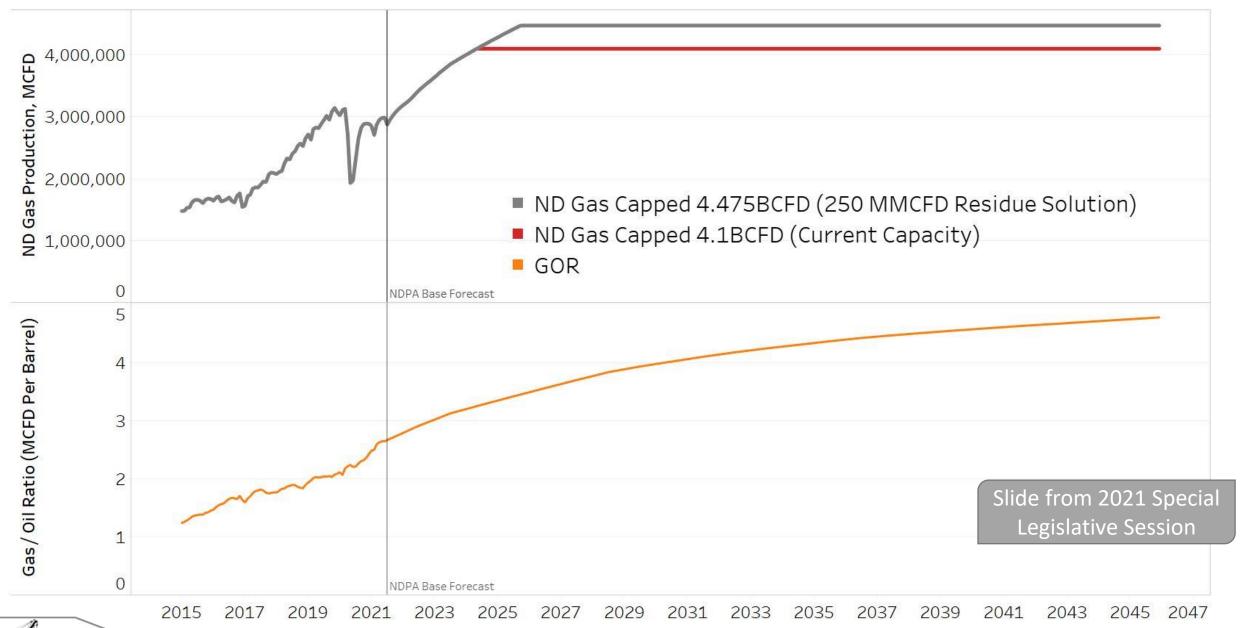
### Legislative Appropriation: Senate Bill 2345 Section 1, subsection 1

There is appropriated from federal funds derived from the state fiscal recovery fund, not otherwise appropriated, the sum of \$150,000,000, or so much of the sum as may be necessary, to the Industrial Commission for the purpose of pipeline infrastructure grants to allow for the transportation of natural gas to eastern North Dakota for the period beginning December 1, 2021 and ending June 30, 2023. Of the funds appropriated in this subsection, at least \$10,000,000 must be used for a project to transport natural gas to areas in Grand Forks County.

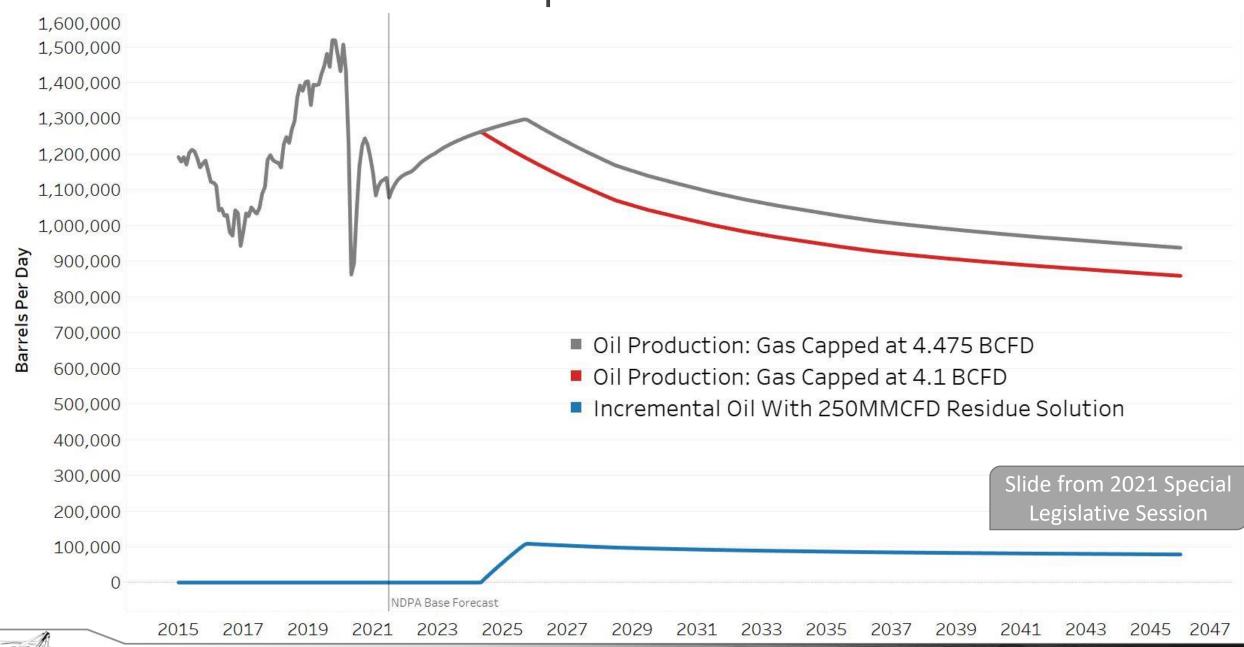
# Legislative Intent Statement: Senate Bill 2345 Section 9

It is the intent of the Sixty-seventh Legislative Assembly that the Sixty-Eighth Legislative Assembly consider providing additional funding for continuing the development of high-pressure transmission pipeline infrastructure for the transportation and competitive selling of natural gas to eastern North Dakota.

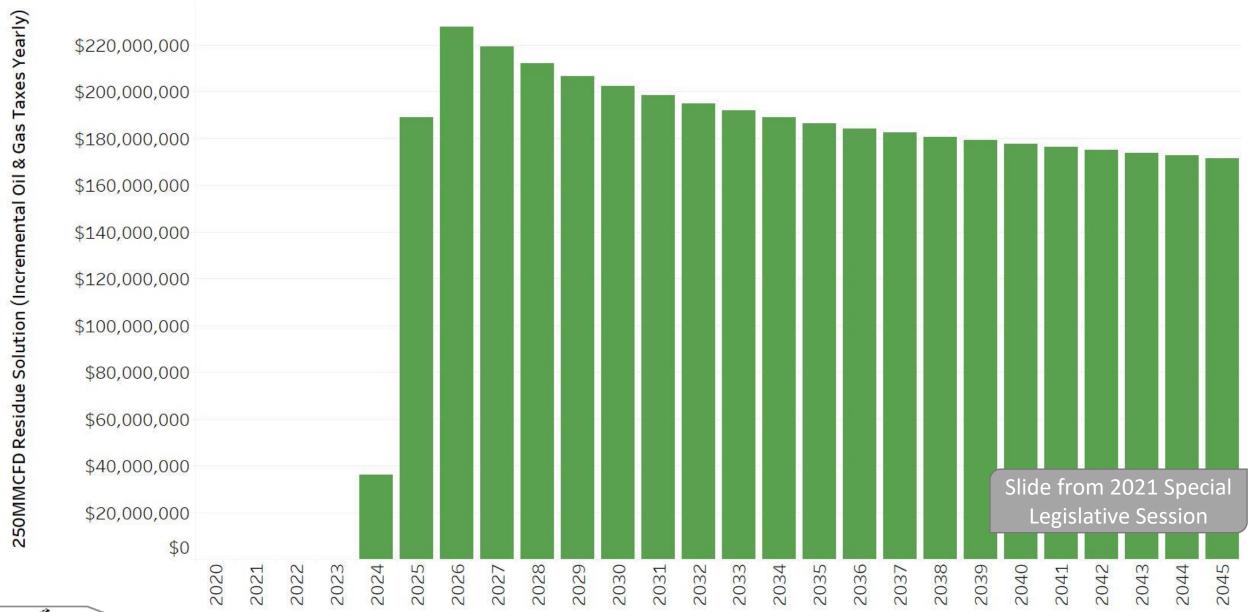
#### Gas Transmission Expected to Limit Oil Production



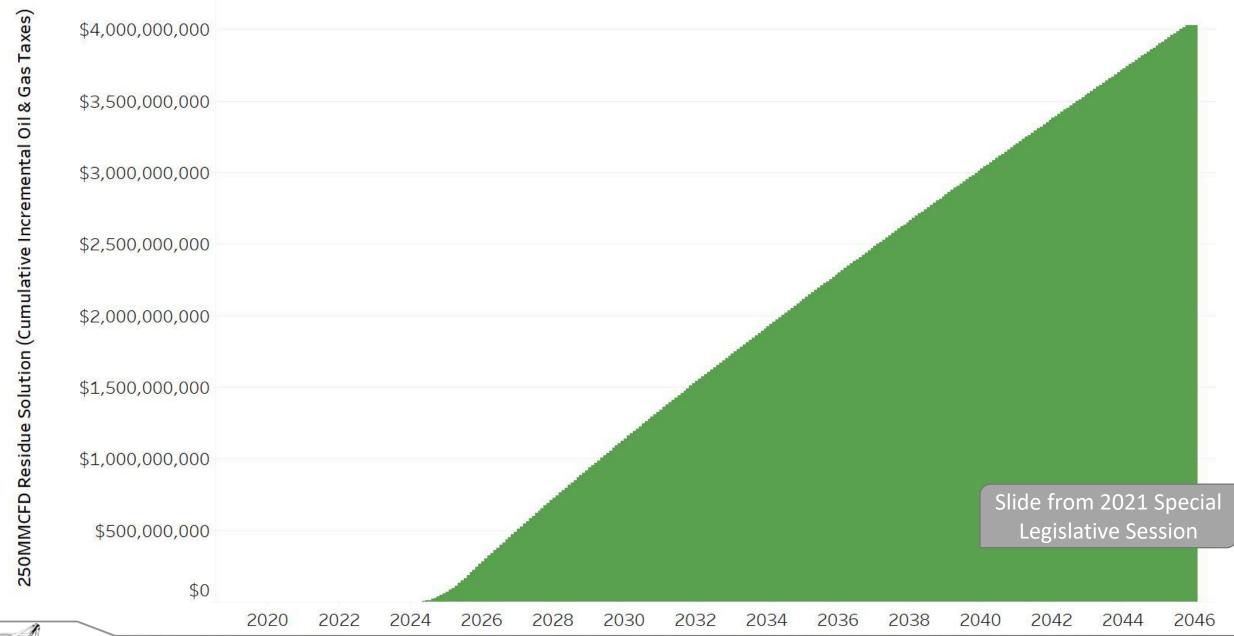
#### Gas Transmission Expected to Limit Oil Production



#### Incremental Oil & Gas Taxes\*: 250 MMCFD Residue Gas Solution



#### Incremental Oil & Gas Taxes\*: 250 MMCFD Residue Gas Solution



#### Timeline for \$10 Million: Grand Forks County



# March 2022 Application Deadline of March 1<sup>st</sup> Grant Review Committee Meets

# April 2022 Grant Review Committee makes recommendation by April 15. Industrial Commission considers funding at April 26<sup>th</sup> meeting.

No later than August 26, 2022 Awardee must verify sufficient shipper commitments and final investment decision prior to contract.

March 1, 2023
Awardee must show that project will be completed by December 30, 2026 or State funding is withdrawn, and funds reappropriated.

#### Timeline for \$140 Million

November 2021
Legislative Action

November 2021/ December 2021 Guidelines Developed and Approved by Industrial Commission May 2022
Application Deadline
of May 1<sup>st</sup>
Grant Review
Committee Meets

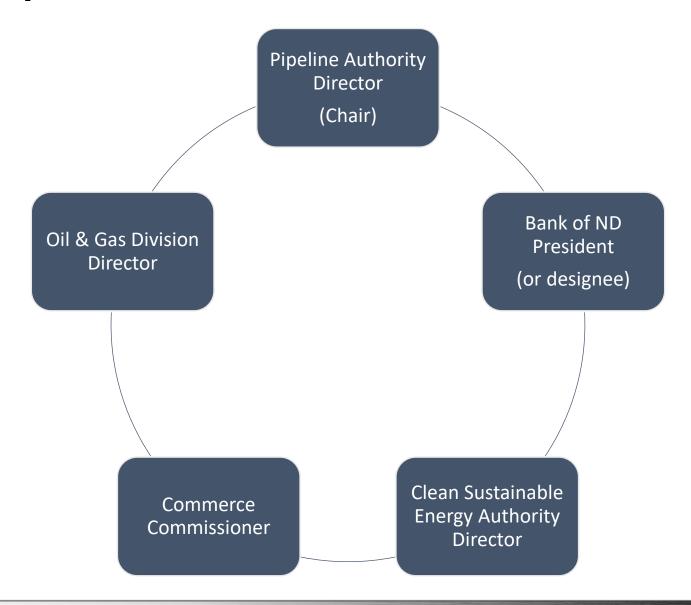
Grant Review
Committee makes
recommendation by
June 15. Industrial
Commission considers
funding at June 29<sup>th</sup>
meeting.

June 2022

No later than
November 29, 2022
Awardee must verify
sufficient shipper
commitments and final
investment decision
prior to contract.

March 1, 2023
Awardee must show that funds will be expended by
December 30, 2026 or State funding is withdrawn and funds reappropriated.

### **Application Review Committee**



### NGP – 1.02 Definitions

- 1. "Commission" means the North Dakota Industrial Commission.
- 2. "Natural gas" means residue natural gas for end use consumption.
- 3. "Natural Gas Pipeline Grant Program" or "NGP Program "means a grant program to expand the North Dakota economy by facilitating the development of pipeline facilities to support the transportation of natural gas for utilization in eastern North Dakota, thereby increasing employment, stimulating economic activity, augmenting sources of tax revenue, fostering economic stability, and improving the state's economy.
- 4. "Natural Gas Pipeline Grant Review Committee" or "Review Committee" means the Department of Mineral Resources Director, Pipeline Authority Director, Bank of North Dakota President or his designee, Clean Sustainable Energy Authority Director, Department of Commerce Commissioner. The Pipeline Authority Director shall serve as Chair of the Review Committee.
- 5. "Pipeline facilities" means pipelines, pumps, compressors, storage, and all other facilities, structures, and properties incidental and necessary or useful in the interconnection of high-pressure pipelines or the transportation of natural gas commodities to points of transfer located within and outside the state. "Pipeline facilities" do not include local distribution infrastructure.
- 6. "Transportation Rate Buy Down" means all grant funding shall be used exclusively for the purpose of offsetting project capital expenditures resulting in a lower natural gas transportation rate while not increasing the rate of return on equity for the recipient.

## NGP – 2.02 Eligibility Criteria

- 1. Be recommended by the Natural Gas Pipeline Grant Review Committee.
- 2. Upon grant award approval, the recipient must demonstrate within five months that sufficient shipper commitments on the pipeline have been obtained.
- 3. Have a *minimum* 60% private sector funding.
- 4. Achieve the priorities and purposes of the NGP Program.
- 5. Operate as a common carrier pipeline.
- 6. Certify funds be used exclusively to lower or "buy down" the transport rate through a fixed return on equity basis.

## NGP – 4.01 Application Evaluation – Criteria

### Degree to which the application meets the Program objectives:

- Expanding the North Dakota economy by facilitating the development of pipeline facilities to support the transportation of natural gas for utilization in eastern North Dakota.
- Increasing employment.
- Stimulating economic activity.
- Augmenting sources of tax revenue.
- Fostering economic stability.

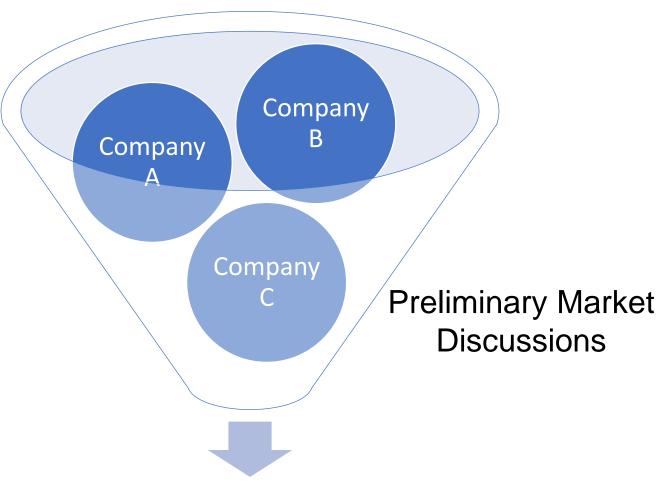
### Priority will be given to applications that:

- Clearly define how grant funds will lower or "buy down" the transport rate through a fixed return on equity basis.
- Have a higher proposed match ratio.
- Have a higher level of potential customer support.



### Marketplace is Expected to Naturally Narrow Applicants

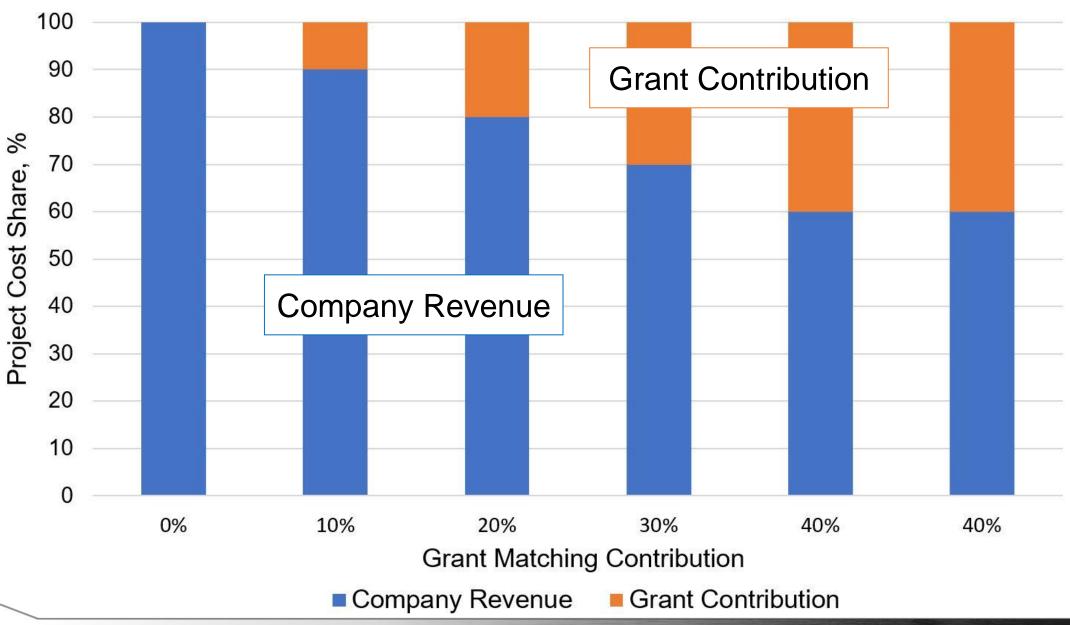
Multiple Companies
Approaching Potential
Customers



Applicants to NGPGP

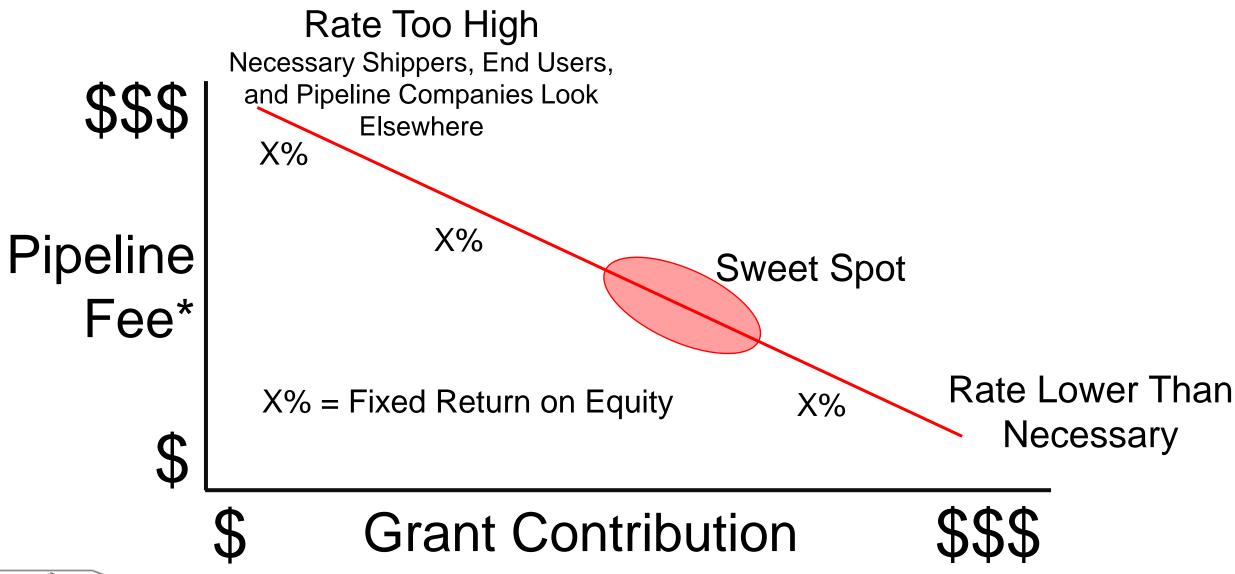


# Company Revenue\* and Grant Contribution





# Grant Contribution Vs. Transport Fee



# BURKE Line Section 25 Line Section 30 COUNTY

# WBI Energy – North Bakken Expansion Project

### **Project Highlights**

- ~60 Miles 24" Pipeline
- ~30 Miles 12" Pipeline
- \$260+ Million
- Preliminary Capacity 250,000 MCFD
- Expandable to 600,000 MCFD
- Q4 2021 Proposed Completion
- Residue Gas Service From North of Lake Sakakawea to Northern Border Pipeline in McKenzie County

Hydrogen/Residue Gas Blending



FortisBC's existing system.

Engineering with the University of British Columbia's Okanagan campus (UBCO) will use these funds to study how to blend hydrogen, safely and reliably, with natural gas within



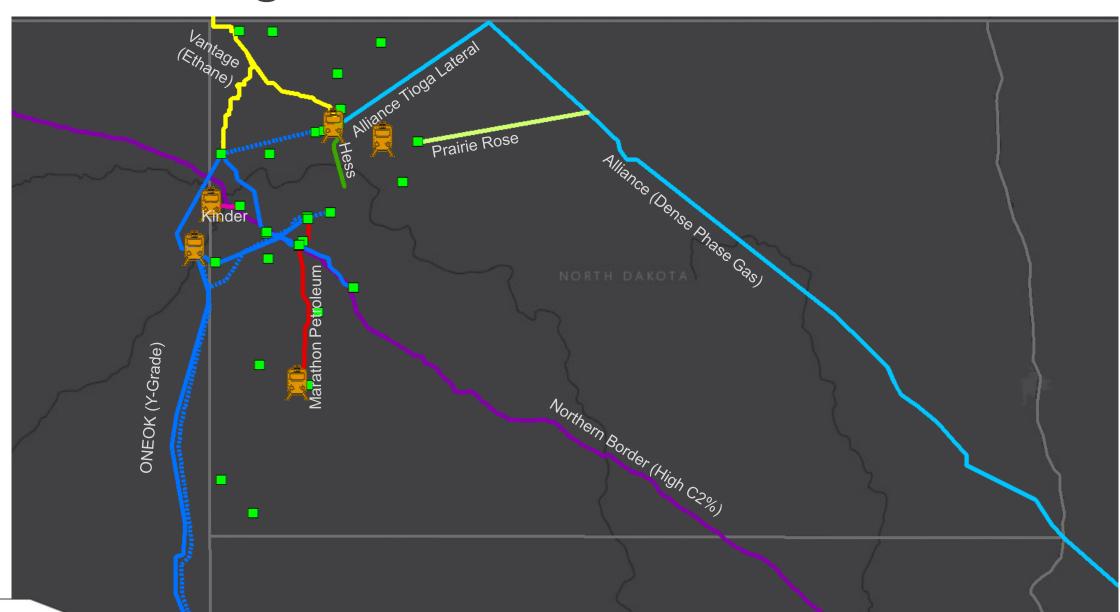
Canadian Utilities, an ATCO company, today announced it has been awarded \$2.8 million in funding from Emission Reductions Alberta's (ERA) Natural Gas Challenge to advance a first-of-its-kind hydrogen blending project in Fort Saskatchewan, Alta. Once complete, the project will be Canada's largest hydrogen blending project, injecting up to five per cent hydrogen by volume into a section of Fort Saskatchewan's residential natural gas distribution network, lowering the carbon intensity of the natural

"Affordably decarbonizing the production of heat is vital to achieve our long-term emissions and energy goals, particularly in our cold Canadian climate, and hydrogen can play a powerful role," said Siegfried Kiefer, President & Chief Executive Officer, Canadian Utilities. "This project is an important first step for Alberta, which has all the ingredients needed to be a leader in the hydrogen economy—including the ability to produce near zero-emissions hydrogen at a lower cost than virtually any other jurisdiction in

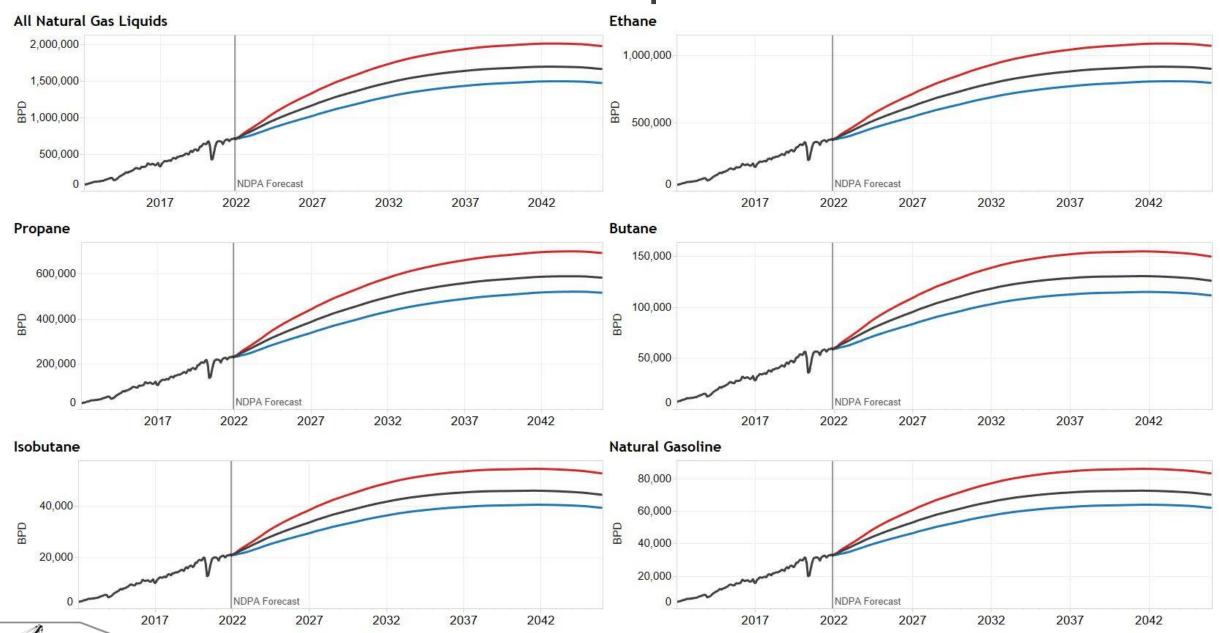


vide hydrogen injection standard.

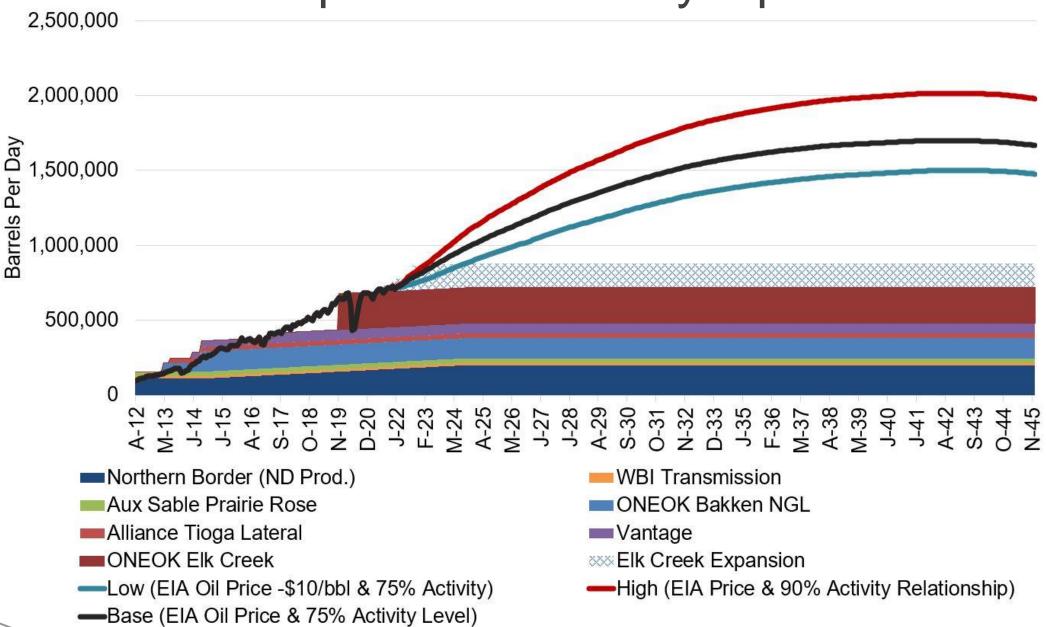
# Regional NGL Infrastructure



### North Dakota Captured\* NGL's

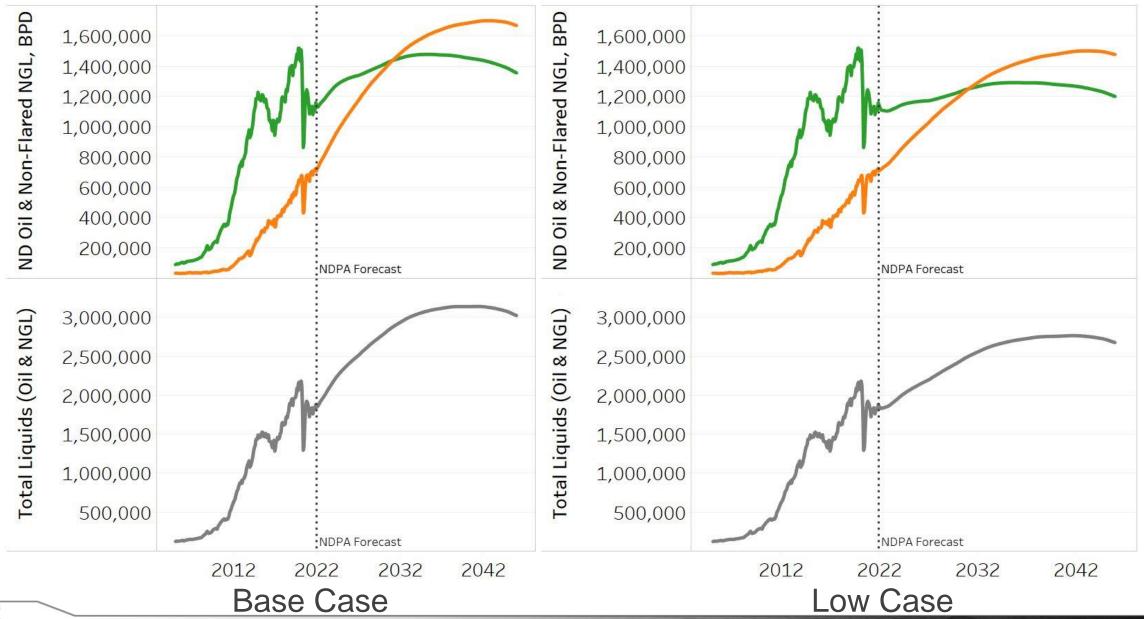


### NGL Pipeline Takeaway Options





# Total Liquids Production (Oil & Non-flared NGL)



### **Contact Information**

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